

## SHARED QUEUE FOR MULTIPLE INPUT-STREAMS

### ABSTRACT OF THE DISCLOSURE

5 A queuing system uses a common buffer for receiving input data from multiple-inputs, by allocating memory-elements in the common buffer to each input-stream, as the streams provide their input data. To allow for an independently controlled unloading of the individual data-items from the multiple-input common buffer, the system maintains a mapping of the memory locations of the buffer that is allocated to each data-item in each input-stream. To  
10 minimize the memory and overhead associated with maintaining a mapping of each data-item, memory locations that are allocated to each input-stream are maintained in a sequential, first-in, first-out queue. When a subsequent receiving device acknowledges that it is ready to receive a data-item from a particular input-stream, the identification of the allocated memory location is removed from the input-stream's queue, and the data-item that is at the allocated memory in the common buffer is provided to the receiving device.  
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